



JOURNAL BRIEF: Reviewing Stormwater Utility Fees for Efficiency, Equity, Adequacy and Feasibility

Sustainable Healthy Cities Journal Brief - 2019, No. 12 - Stormwater Utility Fees

This brief is adapted from the following peer-reviewed journal article: Zhao, J.Z., Fonseca, C., & R. Zeerak. (2019). Stormwater Utility Fees and Credits: A Funding Strategy for Sustainability. *Sustainability*, 11(7).

Study Intent and Research Question

Stormwater utility fees (SUFs) are on the rise among US municipalities. What do local decision makers need to know about SUFs and how should they be thinking about SUFs in relation to key public financing criteria including efficiency, equity, adequacy, and feasibility? This study undertakes a review of existing literature to provide answers to the above noted questions while also providing a practical synthesis of relevant rate structures, credit programs, and mechanisms for setting fees.

Key Background Information

Traditionally, stormwater funding comes from a jurisdiction's general fund, the main revenue source for which is property taxes, putting stormwater management in competition with other local services (NRC, 2008).

SUFs can be used as an alternative revenue source for stormwater programs. SUFs are fees that users pay for their use of the stormwater management system, with revenue generated specifically going to stormwater management, either for capital infrastructure or operations and maintenance (EPA, 2008).

In the last decade, the number of municipalities with SUFs in the US has increased more than 150% (Campbell, 2018). Still, less than 10% of US communities have SUFs in place.

SUFs can be an effective revenue source for implementing sustainability best management practices (BMPs) including rain gardens, wetlands, green roofs and walls, trees, pervious pavement, and on-site rainwater storage.

Almost all states in the US provide municipalities with the legal authority to enact and administer stormwater programs and assess user fees. While in some municipalities, state authorization is sufficient, other municipalities may require voter approval.

Key Findings

Administration and Fee Structure

--Fees can be administered via a stormwater utility district created as a special assessment district that imposes a user fee. Fees can also be administered by a Department of Public Works.

--SUFs can be charged to consumers as a flat rate or a variable rate based on the consumers' use of stormwater management services.

--In a flat rate structure, the consumer pays a fixed amount for the use of stormwater management services regardless of actual usage, according either to an overall flat fee or to a tiered flat fee that varies with the property type.

--In a variable rate structure, the system usage is determined by the volume of stormwater runoff produced by the consumer's land. Parameters for determining usage can include impervious area, water consumption, and the intensity of development.

--Many municipalities have credit programs, generally offered to properties that implement sustainability BMPs to reduce overall runoff or improve runoff quality. Credits are often only offered to non-residential property owners.

--Some municipalities offer assistance programs to offset the burden of SUFs for low-income residents, for example discounts for those below 30% or 60% of area household median income.

Revenue Evaluation Criteria

Common criteria for evaluating public financing mechanisms include: efficiency, equity, adequacy and feasibility. Here we review SUFs with respect to these criteria.

Efficiency- SUFs have the potential to promote the adoption of on-site BMPs and therefore, reduce the overall costs of stormwater management for the municipality, increasing efficiency. However, there is little empirical evidence that explores the extent to which SUFs lead to an increase in adoption of BMPs or other changes in public behavior.

Equity: SUFs are generally more equitable than tax-based revenue because they apply to all properties in a jurisdiction, even tax-exempt entities. In the spectrum of fee structures, those fees tied to the amount of runoff are more equitable, while fees that charge a fixed amount regardless of the amount of runoff are less equitable.

Adequacy: SUFs reduce budgeting uncertainty because they eliminate the need to compete for annual appropriations from the general fund, but, in many cases, SUFs do not generate sufficient funds to meet all stormwater needs of the municipality. Moreover, credits can substantially reduce SUF revenues, by up to 25% in some cases.

Feasibility: SUFs have high visibility and the public is often unsure of how they benefit from such fees. Legal challenges also hinder feasibility, but in most cases municipalities have been able to demonstrate their authority to charge users fees. SUF rate-setting can be subject to legal scrutiny in that they need to reflect the cost of service and no more.

Policy and Practice Implications

Because SUFs are highly visible fees, authorities should be explicit in messaging how SUFs and improved stormwater management are connected to public benefit.

While flat fees are easier to administer, variable fees are more equitable. Variable fees require municipalities to develop a fee that is applicable to each property category via a rate-setting structure that is legally defensible.

Low-income assistance programs are an important part of SUF implementation in order to lower the burden on these populations.

Credit programs need to be calibrated such that the credit offered reflects the actual value (in terms of reduced system cost) that is generated by an adopted BMP. If more credit is offered than a given BMP is actually worth to the system, revenue adequacy concerns can arise.



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Further Reading and References

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The Sustainable Healthy Cities Network is a U.S. National Science Foundation supported sustainability research network focused on the scientific advancement of integrated urban infrastructure solutions for environmentally sustainable, healthy, and livable cities. We are a network of scientists, industry leaders, and policy partners, committed to building better cities through innovations in infrastructure design, technology and policy. Our network connects across nine research universities, major metropolitan cities in the U.S. and India, as well as infrastructure firms and policy groups to bridge research and education with concrete action in cities.